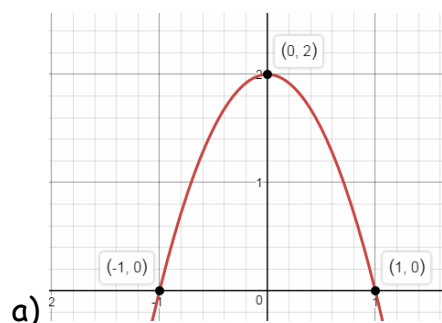


Unit 5 Test - Quadratics

PRACTICE

Expectation	Level Achieved
A2 - relate transformations of the graph of $y = x^2$ to the algebraic representation $y = a(x - h)^2 + k$;	

1. Find the equation of the following in vertex form:



b) a parabola with a vertex of $(-2, 3)$ and a y-intercept of 9

c) a parabola with zeros of -1 and 5 that goes through $(2, 8)$

2. List the transformations that have occurred to obtain $y = -5(x + 8)^2 - 7$

3. Graph the following parabolas. Be sure to label the key features.

$y = -2(x + 1)^2 + 3$	$y = -3x^2 + 7$

Expectation	Level Achieved
A3 - solve quadratic equations and interpret the solutions with respect to the corresponding relations;	

4. Determine how many roots the following parabolas would have without graphing

a) $y = x^2 - 9x + 11$

b) $y = 4x^2 - x - 13$

5. Find the vertex by **Completing the Square** for the following:

a) $y = x^2 + 16x$

Vertex: _____

b) $y = 3x^2 + 24x - 1$

Vertex: _____

6. Solve the following equations

a) $0 = 2(x - 6)^2 - 32$

b) $0 = x^2 + 9x - 3$

c) $0 = 6x^2 - x - 1$